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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/516,983	03/01/2000	Charles A. Eldering	8887.3002CNT	3153
27832	7590	07/08/2005	EXAMINER	
TECHNOLOGY, PATENTS AND LICENSING, INC./PRIME 6206 KELLERS CHURCH ROAD PIPERSVILLE, PA 18947			SHELEHEDA, JAMES R	
			ART UNIT	PAPER NUMBER
			2617	
DATE MAILED: 07/08/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/516,983	ELDERING ET AL.	
	Examiner	Art Unit	
	James Sheleheda	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 April 2005.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 96-116 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 96-116 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>05/18/05</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/25/05 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 96 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure fails to enable one of ordinary skill in the art to make or perform "creating one or more interaction groups" and "applying one or more heuristic rules to the interaction groups", as recited in claim 96.

More specifically, while the specification defines a plurality of user interactions (such as channel changes, volume changes and specific program selections; see Figs. 5 and 6a-c and 7; pages 19-23) and filtering out interactions deemed irrelevant or inconsequential (Figs. 6a-c and 7; pages 20-23), there is no specific mention of creating “interaction groups” based on “viewer interaction characteristics.”

Further, on page 9, paragraph 2 of applicant’s response, applicant specifically states that the current invention is used to determine characteristics about the user interactions, which might indicate that there were six types or “sessions” of viewer interactions (see applicant’s response at page 9, lines 11-15). A “session” as defined in the specification simply refers to interactions that took place between the current time and the time the unit was last turned on (see the specification at page 30, lines 6-11). Heuristic rules are then applied to the user data for this session. The specification as originally filed does not provide support for further reducing this “session” of interactions any further sub-group of interactions.

4. Claims 96, 102 and 108 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure fails to enable one of ordinary skill in the art to make or perform “inferring the size of the household based on the number of distinct viewer characteristics”, as recited in claims 96, 102 and 108.

More specifically, the specification discloses wherein particular actions may predict a particular family size (see the specification at Fig. 12 and page 29, lines 22-27 and page 31, lines 24-29). These plural values are then calculated together to form average values to determine a predicted demographic (page 30, line 23-page 31, line 9). There is no disclosure of determining the family size based on "*the number of distinct viewer characteristics.*" In the claim rejections, "*the number of*" is being interpreted to indicate that a plurality of characteristics are used.

5. Claim 98 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure fails to enable one of ordinary skill in the art to make or user a system "wherein heuristic rules assign probabilities of an interaction group being associated with another interaction group based on the viewer interaction characteristics", as recited in claim 98.

More specifically, heuristic rules are applied to subscriber interactions to assign probabilities of an interaction being associated with a particular viewer characteristic (see, for example, Figs. 10a and 10b, page 26, line 19-page 28, line 4, of the specification). While watching particular types of programming and channel change rates may predict particular demographic data (see the specification at page 26, lines

19-31), there is specific disclosure of heuristic rules predicting any relationships between different interactions or interaction groups.

6. Claims 104 and 113 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The disclosure fails to enable one of ordinary skill in the art to make or user a system “wherein heuristic rules assign probabilities of a viewer characteristic being associated with another viewer characteristic based on the viewer interaction characteristics”, as recited in claim 98.

More specifically, heuristic rules are applied to subscriber interactions to assign probabilities of an interaction being associated with a particular viewer characteristic (see, for example, Figs. 10a and 10b, page 26, line 19-page 28, line 4, of the specification). While watching particular types of programming and channel change rates may predict particular demographic data (see the specification at page 26, lines 19-31), there is no specific disclosure of heuristic rules predicting any relationships between different viewer characteristics.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 96, 97, 99, 100, 102, 103, 105, 106, 108, 109, 112, 114 and 115 are rejected under 35 U.S.C. 102(e) as being anticipated by Alexander et al. (Alexander) (6,177,931) (of record).

As to claim 96, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining size of a household (column 30, lines 29-32), the method comprising:

- (a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52);
- (b) determining viewer interaction characteristics corresponding to the viewer interactions (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);
- (c) creating one or more interaction groups (compiled viewer profile data, column 29, lines 14-21, which is periodically repeated to generate new updated profiles, column 29, lines 22-30) based on the viewer interaction characteristics (containing the viewer interaction information; column 28, lines 30-52 and column 29, lines 14-21);
- (d) applying one or more heuristic rules to the interaction groups (column 29, lines 56-67 and column 30, lines 1-29), wherein the heuristic rules assign a viewer characteristic to each interaction group (determining preference information about the

viewer from the current profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34); and

(e) inferring the size of the household (inferring whether or not the viewer is married and has children; column 30, lines 30-32) based on the number of distinct viewer characteristics (column 30, lines 17-37).

As to claim 102, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining size of a household (column 30, lines 29-32), the method comprising:

(a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52);

(b) determining viewer interaction characteristics corresponding to the viewer interactions (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);

(d) applying one or more heuristic rules to the viewer interaction characteristics (analysis learning viewer preferences based upon the user data; column 29, lines 14-30 and 56-67 and column 30, lines 1-29), wherein the heuristic rules assign one or more viewer characteristics based on the interaction characteristics (determining preference information about the viewer from the profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34); and

(e) inferring the size of the household (inferring whether or not the viewer is married and has children; column 30, lines 30-32) based on the number of distinct viewer characteristics (column 30, lines 17-37).

As to claim 108, Alexander discloses in a video network (column 28, lines 13-21), a computer implemented method (column 5, lines 21-46) of determining size of a household (column 30, lines 29-32), the method comprising:

- (a) monitoring viewer interactions with a multimedia device (column 28, lines 30-52), the viewer interactions occurring during one or more interaction sessions (compiled viewer profile data, column 29, lines 14-21, which is periodically repeated to generate new updated profiles, column 29, lines 22-30);
- (b) determining viewer interaction characteristics corresponding to the viewer interactions (determining the interaction made the viewer and circumstances surrounding those actions; column 28, lines 30-52);
- (d) applying one or more heuristic rules to the viewer interaction characteristics (analysis learning viewer preferences based upon the user data; column 29, lines 14-30 and 56-67 and column 30, lines 1-29), wherein the heuristic rules a viewer characteristic to each interaction session (determining preference information about the viewer from the current profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34) based on the interaction characteristics (determining preference information about the viewer from the profile data; column 29, lines 56-67, column 31, lines 34-47 and column 32, lines 24-34); and

(e) inferring the size of the household (inferring whether or not the viewer is married and has children; column 30, lines 30-32) based on the number of distinct viewer characteristics (column 30, lines 17-37).

As to claims 97, 103 and 112, Alexander discloses wherein the heuristic rules are probabilistic in nature (wherein the rules are inherently probabilistic in that it is predicting demographic characteristics of the user; column 30, lines 17-37).

As to claims 99, 105 and 114, Alexander discloses wherein said monitoring includes at least some subset of channel changes (column 28, lines 32-37), volume changes (column 28, lines 46-49), record commands (column 28, lines 44-46) and time of viewer interaction (column 28, lines 32-35).

As to claims 100 and 115, Alexander discloses wherein step (c) includes evaluating channel change commands and associated viewing times (column 28, lines 30-35 and column 29, lines 34-36) to group the viewer interaction characteristics (accumulated viewing statistics; column 29, lines 50-55).

As to claim 106, Alexander discloses wherein step (c) includes evaluating channel change commands and associated viewing times (column 28, lines 30-35) to determine the viewer interaction characteristics (using the compiled viewing data to determine user preferences; column 29, lines 14-21 and lines 56-67).

As to claim 109, Alexander discloses wherein step (b) includes processing the viewer interactions for an interaction session (processing interactions for the current accumulated profile; column 29, lines 14-37) to generate session interaction characteristics (determining the interaction made the viewer and circumstances surrounding those actions for the most current accumulated session data; column 28, lines 30-52 and column 29, lines 14-37) for each interaction session (for each update of accumulated data; column 29, lines 22-37).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 110 and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander.

As to claim 110, while Alexander discloses wherein said processing includes processing the subscriber interactions for multiple interaction sessions (wherein the profile is constantly updated with current session information; column 29, lines 36-43 and lines 23-27) to generate interaction characteristics for the multiple viewing sessions (to generate an updated profile containing all of the viewing session information; column

29, lines 22-30), he fails to specifically disclose generating average interaction characteristics.

The examiner takes Official Notice that it is notoriously well known in the art to use an average as representative of a large range of values for the typical benefit of finding a value with the best correlation and reducing the effects of extreme values on a system.

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include generating average interaction characteristics for the typical benefit of finding a value with the best correlation and reducing the effects of extreme values on a system.

As to claim 111, Alexander discloses wherein
wherein the heuristic rules are also applied to the average interaction characteristics (assigning rules to the current stored interactions, see the rejection of claim 110 above and column 29, lines 34-43 and column 30, lines 17-37) to assign viewer characteristics (column 29, lines 56-67 and column 30, lines 17-37).

11. Claims 101, 107 and 116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alexander as applied to claims 96, 102 and 108 above, and further in view of Bedard (5,801,747) (of record).

As to claims 101, 107 and 116, while Alexander discloses wherein the interaction characteristics include the number of times a viewer watched a channel and category

and the duration of each viewing, he fails to specifically disclose including viewing time per channel, category and network.

In an analogous art, Bedard discloses a system for creating a viewing profile (column 2, lines 13-22) which will calculate and store a time duration for the time a user spent viewing a particular channel and network (ESPN; see Fig. 2; column 4, lines 49-54) and category (movies, news, etc...; see Fig. 2, column 4, lines 55-65) for the benefit of providing a means to determine a viewer's preferred channels and types of programming (column 3, lines 33-38).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Alexander's system to include viewing time per channel, category and network, as taught by Bedard, for the benefit of providing an additional means to determine a viewer's preferred channels and types of programming based upon the length of time the program was viewed.

Response to Arguments

12. Applicant's arguments filed 04/25/05 have been fully considered but they are not persuasive.

a. While on page 8, paragraph 1, applicant states that pages 29-34 provide full support for the new claims, the specification has in fact been found to lack proper support and the claims are considered to include new matter (see 112 rejections above).

- b. On page 9, applicant's statements on how the current invention is different than Alexander and identifies the household size also do not appear to be supported in any way by the specification as originally filed (see 112 rejections above).
- c. On page 10, applicant argues that Alexander's profile is based on "simple statistical analysis and basic viewer profile data" and does not teach or suggest heuristic rules.

In response, Alexander is operable to "determine" if the "viewer is a fan of a particular team" (see Alexander at column 29, lines 60-67). In such a case a "heuristic rule" is applied that if viewers frequently watch the Boston Red Sox then they are statistically likely to be Boston fans (ex. Frequent viewers of a particular team are likely fans of that team). The examiner finds this to be analogous to the example cited by the applicant wherein if an individual watch "Days of our Lives" then they are likely to be a housewife (or "Days of our Lives" fan) (see specification at Fig. 10a). Similarly, a "heuristic rule" as applied in conjunction with the instant application may further suggest that as a result of being a fan of a particular team, that they may statistically likely be interested in watching particular future programs and/or advertisements related to that team not necessarily explicitly reflect in the EPG data (ex. Boston Red Sox fans are likely to be interested in buying Boston Red Sox products, watching Boston Red Sox advertisements and/or future programming related to the Boston Red Sox)

(column 29, lines 60-67, column 30, lines 17-29, column 31, line 25-column 32, line 6 and column 32, lines 24-34).

d. On page 10, applicant argues that Alexander does not disclose that rules are applied to different interaction groups.

In response, as indicated in the rejections above, Alexander discloses applying heuristic rules to the assembled group of interaction information in the profile (for ex. column 29, lines 56-67) to determine characteristics (such as favorite sports team; column 29, lines 56-67). He further discloses wherein a new updated profile will be created as new data is accumulated (column 29, lines 22-30) which then in turn has rules applied to it (column 29, lines 22-67). This meets the claim limitations of applying heuristic rules to one or more groups and then applying characteristics to each group.

e. On pages 10 and 11, applicant argues that Alexander does not disclose inferring the size of the household.

In response, Alexander specifically discloses inferring whether or not a viewer is married and has children. This is clearly a direct inference into a "size" of a household, as inferring that a man is married and has a child has clearly set a household size of at least 3 people, and is therefore presumably larger in size than a household consisting of an unmarried, childless man. The claim language

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does not specifically require predicting the exact *number* of people in a household, simply an inference into the size.

f. As to applicant's arguments on pages 12-14, see the rejections and (a)-(d) above.

g. The Official Notice presented in the prior action stating that it is notoriously well known in the art to use an average as representative of a large range of values was not traversed and is accordingly taken as an admission of the fact noted.

Conclusion

13. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (571) 272-7357. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Shelehedra
Patent Examiner
Art Unit 2614

JS



VIVEK SRIVASTAVA
PRIMARY EXAMINER